

WHAT IS CLAIMED IS:

1. A method for dynamically controlling frame retransmissions over a wireless link, comprising:

in response to at least unsuccessfully
5 receiving a frame for a packet from a wireless link,
determining a position of the frame in a set of related
frames for the packet;

determining an allowed number of
retransmissions for the frame based on the position of
10 the frame in the set of related frames; and

requesting retransmission of the frame up to
the allowed number of retransmissions.

2. The method of Claim 1, wherein the allowed
15 number of retransmissions for the frame increases as the
position of the frame in the set of related frames
increases.

3. The method of Claim 1, wherein the set of
20 related frames comprises all frames for the packet.

4. The method of Claim 1, wherein the set of
related frames comprises a set of successfully received
frames for the packet.

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5. The method of Claim 1, wherein a first subset
of frames in the set comprise a first allowed number of
retransmissions, a subsequent second subset of frames in
the set comprise an increased allowed number of
30 retransmissions, and a still subsequent third subset of
frames comprise a still further increased allowed number
of retransmissions.

6. The method of Claim 1, wherein the number of retransmissions is further based on quality of a link over which the frame was transmitted.

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7. A system for dynamically controlling frame retransmissions over a wireless link, comprising:

means, in response to at least unsuccessfully receiving a frame for a packet from a wireless link, for
5 determining a position of the frame in a set of related frames for the packet;

means for determining an allowed number of retransmissions for the frame based on the position of the frame in the set of related frames; and

10 means for requesting retransmission of the frame up to the allowed number of retransmissions.

8. The system of Claim 7, wherein the allowed number of retransmissions for the frame increases as the
15 position of the frame in the set of related frames increases.

9. The system of Claim 7, wherein the set of related frames comprises all frames for the packet.

20 10. The system of Claim 7, wherein the set of related frames comprises a set of successfully received frames for the packet.

25 11. The system of Claim 7, wherein a first subset of frames in the set comprise a first allowed number of retransmissions, a subsequent second subset of frames in the set comprise an increased allowed number of retransmissions, and a still subsequent third subset of
30 frames comprise a still further increased allowed number of retransmissions.

12. The system of Claim 7, wherein the number of retransmissions is further based on quality of a link over which the frame was transmitted.

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13. A system for dynamically controlling frame retransmissions over a wireless link, comprising:

logic encoded in media; and

the logic operable for a frame unsuccessfully
5 received over a wireless link to determine a position of
the frame in a set of related frames for a packet to
which the frame belongs, to determine an allowed number
of transmissions for the frame based on the position of
the frame in the set of related frames and to request
10 retransmission of the frame up to the allowed number of
retransmissions.

14. The system of Claim 13, the logic further
operable to increase the allowed number of
15 retransmissions for the frame as a position of the frame
increases in the set of related frames.

15. The system of Claim 13, wherein the set of
related frames comprises all frames for the packet.
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16. The system of Claim 13, wherein the set of
related frames comprises a set of successfully received
frames for the packet.

25 17. The system of Claim 13, wherein a first subset
of frames in the set comprises a first allowed number of
retransmissions, a subsequent second subset of frames in
the set comprises an increased allowed number of
retransmissions, and still a subsequent third subset of
30 frames comprises a still further increased allowed number
of retransmissions.

18. The system of Claim 13, wherein the number of retransmissions is further based on quality of a link over which the frame was transmitted.

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19. A method for transmitting information over a wireless link, comprising:

receiving a packet of information;

5 segmenting the packet into a set of related radio frames;

identifying the packet in each frame of the set;

transmitting the frames over a wireless link; and

10 wherein a device receiving the frames over the wireless link is operable to associate the frames with a packet based on the identifier, to determine a relative position of a frame having a transmission error within the set of frames for the packet and to dynamically adjust a number of retransmissions for the frame based on the position of the frame in the set of frames for the
15 packet.

20. The method of Claim 19, the device further operable to dynamically adjust the number of retransmissions based on a link quality threshold.

21. A mobile communication device, comprising:

a wireless interface operable to receive code division multiple access (CDMA) frames transmitted over a wireless link;

5 a processor operable to identify a packet to which each frame corresponds based on information in the frames; and

the processor operable to request retransmission of a first frame for a packet up to an allowed number of
10 retransmissions that is less than that for a later frame for the packet.

22. A method for dynamically controlling frame retransmissions over a wireless link, comprising:

in response to unsuccessfully receiving a code division multiple access(CDMA) frame for an Internet
5 protocol (IP) packet from a wireless link, determining a position of the CDMA frame in a set of related frames for the IP packet;

determining an allowed number of retransmissions for the CDMA frame based on the position of the CDMA frame in
10 the set of related frames for the IP packet; and

requesting retransmission of the CDMA frame up to the allowed number of retransmissions.

23. The method of Claim 22, wherein the position of
15 the CDMA frame in the set of related frames comprises a number of the CDMA frame in all frames for the IP packet, further comprising increasing the allowed number of retransmissions for the CDMA frame as the number of the CDMA frame in the IP packet increases.

24. The method of Claim 22, wherein the position of
the CDMA frame in the set of related frames comprises the number of the CDMA frame in a set of successfully received CDMA frames for the IP packet, further
25 comprising increasing the allowed number of retransmissions of the CDMA frame as the number of successfully received CDMA frames for the IP packet increases.

25. The method of Claim 22, further comprising
30 determining the allowed number of retransmissions based on a link quality threshold.